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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,502	09/25/2001	Tetsuharu Tanaka	107348-00119	5501

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ARENT FOX KINTNER PLOTKIN & KAHN
1050 CONNECTICUT AVENUE, N.W.
SUITE 400
WASHINGTON, DC 20036

EXAMINER

BOYD, JENNIFER A

ART UNIT PAPER NUMBER

1771

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/856,502	Applicant(s) TANAKA ET AL.	
	Examiner Jennifer A Boyd	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 22, 2004 has been entered. The Applicant's Amendments and Accompanying Remarks, filed September 23, 2004, have been entered and have been carefully considered. Claims 1 and 6 are amended and claims 1, 6 and 13 are pending. In view of Applicant's amendments, the Examiner withdraws all previously set forth rejections as detailed in paragraphs 3 – 4 of the previous Office Action dated June 24, 2004. However, after an updated search, additional prior art has been found which renders the invention as currently claimed to be unpatentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al.(US 4,781,976) in view of Mills (US 5,252,164).

Fujita et al. is directed to a skin covering for trims of automobiles.

As to claim 1, Fujita teaches that the skin covering comprises a surface layer, a foam

layer and a back layer (Abstract). The Examiner equates the surface layer to Applicant's "skin body". The skin covering is applied to a cloth (column 3, lines 65 – 68 and column 4, lines 1 – 5). Fujita teaches that the surface layer, or "skin body", comprises high polymerization PVC, equated to Applicant's "synthetic resin" and other additives such as titanium oxide as a filler, equated to Applicant's "infrared-ray reflective pigment" (column 2, lines 25 – 55). According to *Knovel Critical Tables*, titanium oxide is an excellent reflector of infrared light.

As to claim 6, Fujita teaches that the skin covering comprising a surface layer, a foam layer and a back layer (Abstract). The Examiner equates the surface layer to Applicant's "upper layer body" and "upper layer" and the back layer to Applicant's "lower layer" and "lower layer body". Fujita teaches that the surface layer, or "upper layer body/upper layer", comprises high polymerization PVC, equated to Applicant's "synthetic resin" and other additives such as titanium oxide as a filler, equated to Applicant's "infrared-ray reflective pigment". According to *Knovel Critical Tables*, titanium oxide is an excellent reflector of infrared light. Fujita teaches that the back layer, or "lower layer/lower layer body", comprises low polymerization polyvinyl chloride (PVC) and can additionally contain fillers (column 3, lines 20 – 35). Although, Fujita does not specifically teach certain fillers in the paragraph discussing the back layer, Fujita does teach that common fillers include carbon black (column 2, lines 50 – 53). The skin covering is applied to a cloth (column 3, lines 65 – 68 and column 4, lines 1 – 5). According to *Complete Textile Glossary*, a cloth is a generic term embracing all textile fabrics and felts and includes any pliant fabric including knits.

Fujita fails to teach that the surface of the skin is roughened having a plurality of recesses and projections as required by claims 1 and 6.

Mills is directed to a method of molding a cover material over a preformed door insert and a plastic panel insert of an interior trim product for an automobile (column 1, lines 44 – 50). Mills teaches that the cover material is made of a polyvinyl chloride (PVC) material which has a soft touch and can include a grain therein, i.e. simulated leather (column 3, lines 15 – 25). Mills notes that the grain of the cover material can be perfectly matched along with eliminating color shift between the parts which can occur when different pieces of skin are utilized. It is the position of the Examiner that the grain on the surface of the cover material would inherently have Applicant's "recesses" and "projections".

It would have been obvious to one of ordinary skill in the art at the time the invention was made to create the skin covering of Fujita with a grain as suggested by Mills motivated by the desire to create an aesthetically pleasing skin surface which has the appearance of leather.

As to claims 1 and 6, Fujita in view of Mills discloses the claimed invention except for that the titanium oxide filler is present in the amount of 0.3 parts to 10 parts per 100 parts of synthetic resin as required by claims 1 and 6 and that the height of the projections of the roughened surface of the skin ranges from 0.05 mm to 0.35 mm as required by claims 1 and 6. It should be noted that the amount of filler present in the synthetic resin and the height of the projections are result effective variables. For example, as the amount of filler increases, the

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synthetic resin becomes stronger and has a higher infrared reflectance, thus resistivity, to exposure to the sun. As the projection height increases, the skin has more of a leather-like appearance with minimal color shift and as the height decreases, the surface becomes more glossy. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a skin where the titanium oxide filler is present in the amount of 0.3 parts to 10 parts per 100 parts of synthetic resin as required by claims 1 and 6 and that the height of the projections of the roughened surface of the skin ranges from 0.05 mm to 0.35 mm as required by claims 1 and 6 since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the amount of filler present in the synthetic resin and the skin surface roughness to maximize the infrared reflective capabilities and to create an aesthetically pleasing surface that has a leather-like appearance. Additionally, it should be noted that according to *Plastic Additives: An A-Z Reference*, titanium dioxide, a type of titanium oxide, is the most important white pigment used in PVC and the typical amount required can be between 1 and 10 parts of titanium dioxide per 100 parts of PVC.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita (US 4,781,976) and Mills et al. (US 5,252,164) as applied above and further in view of Hutchinson et al. (GB 2,331,525).

Fujita teaches a surface layer, or "skin body", comprising polyvinyl chloride (PVC) and

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conventional other additives such as plasticizers, stabilizers, catalysts, fillers, pigments and the like (column 2, lines 25 – 37). Fujita teaches that the plasticizers can include phthalic acid esters (column 2, lines 35 – 36) and phosphates (column 2, lines 42 – 44). The plasticizers can be present in the amount of 5 to 80 parts per 100 parts by weight of PVC (column 2, lines 45 – 48). Fujita teaches that the stabilizer used can include Ba-Zn stabilizers (column 2, lines 49 – 50).

Fujita in view of Mills et al. fails to teach that the polyvinyl chloride additionally includes an amine-based stabilizer.

Hutchinson teaches a composition for treating vinyl surfaces for protection against environmental exposure and deterioration caused by ultraviolet light. (Abstract). The composition comprises from 0.01 to 20 weight percent of at least one hundred amine light stabilizer (Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use 0.01 to 20 weight percent of at least one hundred amine light stabilizer in the polyvinyl chloride resin motivated by the desire to protect the resin from environmental exposure and deterioration caused by ultraviolet light which is a concern for maintaining the integrity and appearance of trims of automobiles.

Fujita in view of Mills and Hutchinson discloses the claimed invention except for that the Ba-Zn stabilizer is present in the amount of 3 parts per 100 parts of the polyvinyl chloride. It should be noted that the amount of Ba-Zn stabilizer is a result effective variable. For example, as the amount of stabilizer increases, the polyvinyl chloride becomes less susceptible to chemical change. It would have been obvious to one having ordinary skill in the art at the time the

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invention was made to make a mixture where the Ba-Zn stabilizer is present in the amount of 3 parts per 100 parts of the polyvinyl chloride since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the amount of Ba-Zn stabilizer in the polyvinyl chloride to maintain the color and thermal stability of the resin.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 6 and 13 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer Boyd
January 4, 2005



TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700